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MILKWEED VINE, MORRENIA ODORATA--AN IDENTIFICATION AID

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MUCH HAS BEEN WRITTEN ABOUT THE MILKWEED VINE, MORRENIA ODORATA LINDL., CONCERNING ITS SERIOUSNESS AS A PEST AND ATTEMPTS TO CONTROL IT (2,3,4,7,8,9,10,11). VERY LITTLE, HOWEVER, IS READILY AVAILABLE AS AIDS IN IDENTIFYING THIS PLANT AND SEPARATING IT FROM OTHER SIMILAR PLANTS. PHOTOS ARE AVAILABLE (2,3,9,10), BUT DETAILED DESCRIPTIONS ARE GENERALLY LACKING. TAXONOMIC TREATMENTS COVERING MORRENIA ODORATA ARE SCARCE.

THE FIRST REPORT OF M. ODORATA ESTABLISHED IN FLORIDA WAS IN 1957 IN A GROVE IN ORLANDO OWNED BY MR. D. J. NICHOLSON. THIS INFESTATION APPARENTLY CAME FROM SEED FROM AN ORNAMENTAL PLANTING SOMEWHERE NEARBY, THOUGH THE ORIGINAL PLANT WAS NEVER FOUND. THIS INFESTATION PLUS THE ORIGINAL PLANTING APPARENTLY FURNISHED SEED TO ESTABLISH MANY NEW INFESTATIONS AND STARTED THE RAPID SPREAD OF THIS PEST.

M. ODORATA HAS SINCE SPREAD THROUGH CITRUS AREAS AS FAR SOUTH AS HIGHLANDS AND DE SOTO COUNTIES, AND AS FAR NORTH AS MARION COUNTY. AT LEAST ONE ISOLATED PLANT WAS FOUND GROWING NATURALLY AND SUBSEQUENTLY DESTROYED AT GAINESVILLE, ALACHUA COUNTY. IT IS NOT KNOWN HOW FAR NORTH THIS PLANT WILL SURVIVE, BUT THE NORTHWARD SPREAD APPEARS TO HAVE SLOWED CONSIDERABLY. IT SEEMS BEST ADAPTED TO CITRUS AREAS AND SO FAR HAS NOT BEEN A SERIOUS PROBLEM OUTSIDE THESE AREAS.

WHEN THIS PLANT WAS FIRST FOUND AS A PEST, THE LATE PROFESSOR ERDMAN WEST TENTATIVELY IDENTIFIED IT AS CYNANCHUM CUBENSE (GRISEB.) WOODSON. FLOWERS ARE NECESSARY TO SEPARATE CYNANCHUM FROM MORRENIA. HE DID NOT HAVE FLOWERING MATERIAL AT THAT TIME, BUT WAS ABLE TO CORRECT THE IDENTIFICATION TO MORRENIA ODORATA WHEN FLOWERS BECAME AVAILABLE. C. CUBENSE IN FLORIDA IS RESTRICTED TO EXTREME SOUTHERN FLORIDA AND IS NOT A SERIOUS PEST.

MORRENIA ODORATA WAS DESCRIBED BY JOHN LINDLEY (5) IN 1838 FROM ARGENTINA. FOLLOWING IS A DESCRIPTION PUBLISHED BY MORONG AND BRITTON (6) OF M. ODORATA COLLECTED IN PARAGUAY: "A NOBLE VINE CLIMBING OVER SHRUBS AND TREES, FOUND IN THICKETS THROUGHOUT THE COUNTRY. FLOWERS WHITE, VERY FRAGRANT. INSIDE OF THE COROLLA IS AN ERECT 5-LOBED CORONA, THE TRUNCATE LOBES 2 TOOTHED, PROJECTING IN A FLAP OVER THE GYNOSTEGIUM. STEM AND LEAVES CANESCENT, COPIOUSLY MILKY. LEAVES OPPOSITE, CORDATE OR HASTATE, ABRUPTLY CURVING INTO A LONG ACUTE POINT, THE LARGEST 10 CM. IN LENGTH. FRUIT AN IMMENSE OVATE FOLLICLE, SOMETIMES 10 CM. LONG AND 7 CM. BROAD AT THE BASE. SEEDS BLACK, SOMEWHAT ANGLED AND TUBERCULATE, LINEAR, 6 MM. LONG, SURMOUNTED BY A SOFT WHITE SILKY COMA 4-5 CM. LONG. THIS PLANT IS OFTEN CULTIVATED IN GARDENS AT ASUNCION, AND THE ABUNDANT COMA IS USED FOR MAKING PILLOWS, FOR WHICH PURPOSE IT IS WELL FITTED, AS IT IS AS SOFT AS EIDER DOWN." BAILEY (1) MAKES THE FOLLOWING COMMENT: "ALLIED TO CYNANCHUM, BUT DIFFERING IN ITS CONVEX 2-LOBED STIGMA (FLAT OR CONCAVE IN CYNANCHUM) AND THE TUBULAR CORONA, WHICH IS LONGER THAN THE PISTILS, VILLOSE ON THE INSIDE, AND CONNIVING OVER THE PISTILS. THE LVS. ARE OPPOSITE AND HASTATE. M. ODORATA, LINDL., IS MORE OR LESS IN CULT., AND IS LISTED IN S. CALIF. IT HAS WHITE VERY FRAGRANT FLS. IN DENSE CYMES IN THE AXILS; SEPALS 5, LINEAR; COROLLA ROTATE, THE LOBES WIDE-SPREADING AND ACUMINATE; CORONA TUBULAR, 5-LOBED. ARGENTINA AND PARAGUAY. HAS MERIT FOR THE AGREEABLE VANILLA FRAGRANCE OF ITS INCONSPICUOUS FLS."

THE MOST READILY OBSERVED DIAGNOSTIC CHARACTERS OF M. ODORATA ARE THE LEAF SHAPES AND THE GRAY-GREEN COLOR OF ITS FOLIAGE. THE LEAVES OF M. ODORATA ARE OPPOSITE ON LONG PETIOLES AND ARE PRIMARILY OF TWO SHAPES (FIG. 1). LEAVES ON YOUNG PLANTS OR VIGOROUS SPROUTS ARE BROAD AND CORDATE, USUALLY WITH AN ACUMINATE TIP. LEAVES ON MATURE PLANTS EXPOSED TO FULL SUN ARE NARROWER AND HASTATE, USUALLY ONLY SLIGHTLY ACUMINATE, AND TRUNCATE OR SLIGHTLY TAPERING AT THE BASE, NOT CORDATE. INTERMEDIATE LEAF SHAPES CAN ALSO BE FOUND. THE LEAVES ARE PUBESCENT, GIVING THEM A GRAY-GREEN APPEARANCE WHICH CONTRASTS SHARPLY WITH THE NORMAL DARK GREEN OF CITRUS LEAVES. FRUITS ARE LARGE FOLLICLES (FIG. 2) ABOUT THE SIZE AND SHAPE OF AVOCADOS AND HAVE A DEEP GROOVE ON ONE SIDE. THEY ARE GREEN UNTIL MATURITY, THEN TURN LIGHTER GREEN, TAN, OR BROWN, AND OPEN TO RELEASE THE SEEDS. THE SEEDS HAVE COMAS OR PARACHUTES ATTACHED, MAKING THEM EASILY WIND DISSEMINATED.

THE VINES OFTEN COMPLETELY COVER CITRUS AND OTHER TREES, SEVERELY SHADING AND STUNTING THE HOST TREE (FIG. 3). THIS RESULTS IN REDUCED YIELDS AND HIGHER MAINTENANCE COSTS. VINES ALSO GROW ON AND OVER FENCES, POWER LINE GUY WIRES, IRRIGATION PIPES, AND ANY OTHER AVAILABLE SUPPORT.

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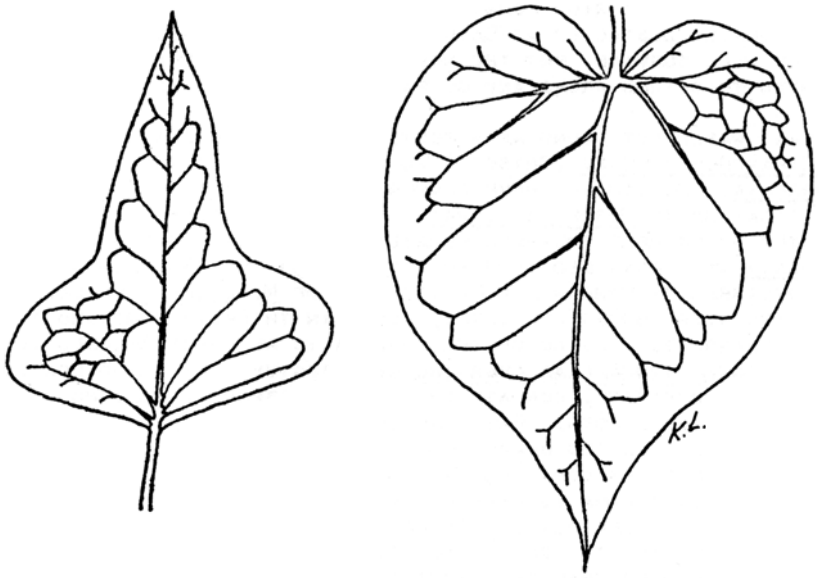

Fig. 1. Leaf shapes of Morrenia odorata.

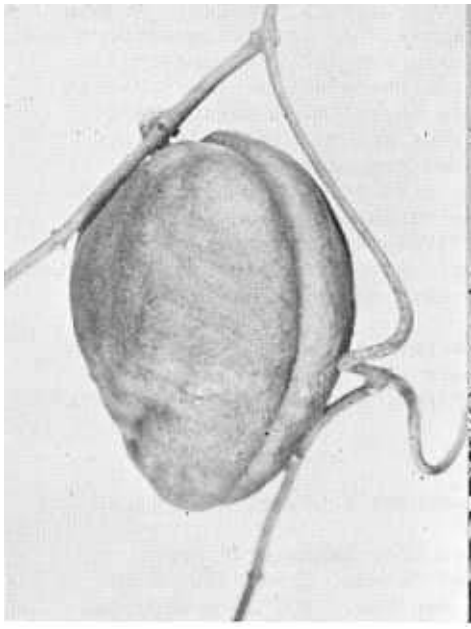

Fig. 2. Fruit of Morrenia odorata.

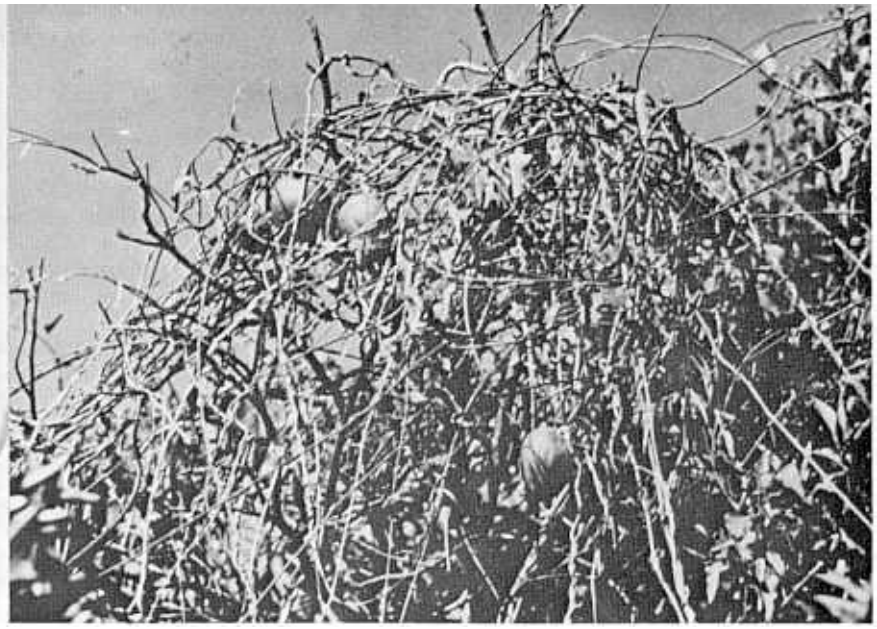

Fig. 3. Vine of Morrenia odorata growing over and covering a citrus tree.